# **BookletChart**<sup>TM</sup>

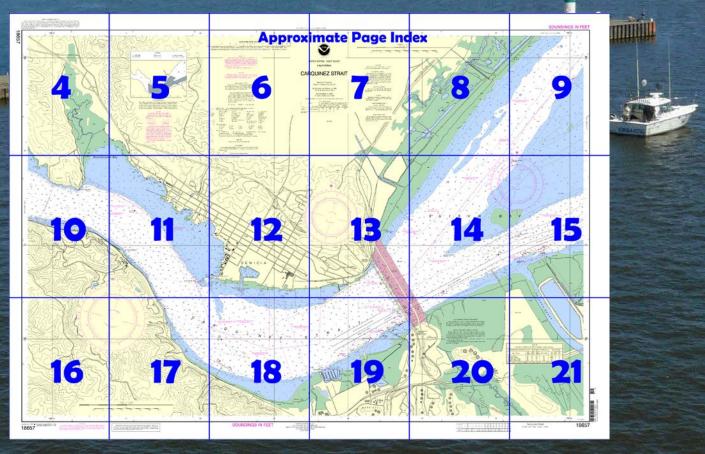
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# Carquinez Strait NOAA Chart 18657

A reduced-scale NOAA nautical chart for small boaters When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



# Published by the National Oceanic and Atmospheric Administration National Ocean Service Office of Coast Survey

<u>www.NauticalCharts.NOAA.gov</u> 888-990-NOAA

## What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

#### What is a BookletChart<sup>™</sup>?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

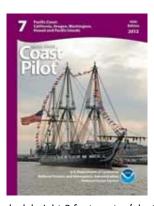
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <a href="http://www.NauticalCharts.NOAA.gov">http://www.NauticalCharts.NOAA.gov</a>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

## **Notice to Mariners Correction Status**

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <a href="http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=186">http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=186</a> <a href="mailto:57">57</a>.



# (Selected Excerpts from Coast Pilot)

A light is 130 yards off the S side of Carquinez Strait, 1.5 miles E of Interstate Route 80 fixed highway bridges; a light is off **Port Costa**, 0.6 mile to the E. On the N side of the strait, a light is on **Dillon Point** and another is off **Benicia Point**. The Defense Fuel Supply Center Support Point, Ozol Oil Wharf, at **Ozol**, is 1.6 miles SE of Port Costa. The 270-foot offshore wharf, marked by lights on the E and W ends, has 880 feet of berthing space with dolphins; 37 feet alongside;

deck height 8 feet; water/electrical shore power connections are available; owned by the U.S. Government, operated by Blaiz Co., Inc.

There are three wharves extending out to deep water at **Martinez**, 2 miles SE of Point Carquinez.

The westernmost of these facilities is the municipal fishing pier with a tugboat slip on its W side. A small-boat harbor, protected by breakwaters, is on the E side of the pier. A private light is on the channel end of both breakwaters. In 1994, shoaling to a depth of about 4 feet was reported at the entrance to the marina.

The Shell Oil Co., Martinez Refinery Wharf, E of the municipal fishing pier, is a 900-foot offshore wharf, 1,850 feet usable with dolphins; depth of 42 feet alongside decreasing to 39 feet at the W end; deck height is 15 feet; water and electrical shore power connections are available; owned and operated by Shell Oil Co. The wharf is marked by private lights and a sound signal. A security zone has been established around the wharf. (See 165.1197, chapter 2, for limits and regulations.) The Tesoro Amorco Pier, Upper and Lower Wharves, 400 yards E of the Shell Oil Co. Wharf, have depths of 35 feet alongside and both are used for bunkering vessels as well as the receipt and shipment of petroleum products. The W wharf is a 76-foot offshore wharf with 281 feet usable with dolphins; depth of 35 feet alongside; deck height is 15 feet. The E wharf is a 76-foot offshore wharf with 512 feet usable with dolphins; deck height is 17 feet. The wharves provide 978 feet of continuous berthing space; owned and operated by Tesoro Corp. Both wharves are marked by private lights. A security zone has been established around the wharves. (See 165.1197, chapter 2, for limits and regulations.) **Benicia** is on the N shore at the E end of Carquinez Strait. Most of the smaller piers around the town are in ruins.

A marina, protected by breakwaters, is at Benicia. Private lights on the breakwater mark the entrance. (See the small-craft facilities tabulation on Chart 18652 for services and supplies available.)

In 1988, a sunken wreck with a least depth of 21 feet was reported about 600 yards WSW of the Port of Benicia in about 38°02'17.5"N., 122°08'39.6"W.

The **Port of Benicia** is at Army Point at the E end of the town. Highway and railroad connections, and water and electrical shore power connections are available at all of the facilities.

Valero-Benicia Refinery (38°02'41"N., 122°07'45"W.): 1,100 feet of berthing space; 40.4 feet alongside; deck height, 15 feet; receipt and shipment of petroleum products; receipt of crude oil; owned and operated by Valero Energy Corp. A **security zone** has been established around the wharf. (See **165.1197**, chapter 2, for limits and regulations.) Benicia Industries, Wharf No. 95 (38°02'28"N., 122°08'05"W.): 2,404 feet of berthing space; 38 feet alongside; deck height, 11 to 15 feet; receipt of automobiles and crude oil; receipt and shipment of general cargo; shipment of bagged rice, petroleum coke, and petroleum products; owned by Benicia Industries, Inc., and operated by various companies. **Bulls Head Point**, just E of the S end of the bridge, shows as a 100-foot rounding hill with a prominent high white stack.

The Tesoro Corporation, Avon Refinery Wharf extends across the flats at **Avon**, 1.5 miles E of the Suisun Point bridges. Total berthing space is 1,320 feet; depths alongside the channel face are 32 feet; deck height is 19 feet, with 14 feet at the center section. Tankers berth along the channel side of the face, and barges along the inshore side of the face; receipt and shipment of petroleum products; owned and operated by Tesoro Corporation. Private lights and sound signals are on the outer ends of the pier.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Alameda

Commander 11<sup>th</sup> CG District Alameda, CA

(510) 437-3700

2

Corrected through NM Nov. 12/05 Corrected through LNM Nov. 1/05

Mercator Projection Scale 1:10,000 at Lat 38° 03'

North American Datum of 1983 (World Geodetic System 1984)

SOUNDINGS IN FEET AT MEAN LOWER LOW WATER

#### HEIGHTS

Heights in feet above Mean High Water.

#### CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

#### RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

#### CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

#### AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to

#### HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.287" southward and 3.874' westward to agree with this chart.

The NOAA Weather Radio stations listed below provide continuous weather broadcasts The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

NOAA WEATHER BADIO BROADCASTS

Mt. Pise, CA

KHB-49 162.40 MHz WX2

### SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Cable Area

Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and sub-marine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling. Covered wells may be marked by lighted or

unlighted buoys.

### WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

### POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

# **Table of Selected Chart Notes**

#### NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are pub-lished in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 11th Coast Guard District in Alameda, California or at the Office of the District Engineer, Corps of Engineers in San Francisco, California.

Refer to charted regulation section numbers.

#### SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, <u>United States Coast Pilot.</u>

#### AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast rvey, with additional data from the Corps of Engineers, and U.S. Survey, with a Coast Guard.

#### BENICIA-MARTINEZ RAILROAD DRAWBRIDGE

Fixed red lights are shown to mark the piers supporting the spans that adjoin the lift span. A fixed green light is shown to mark the middle of each of those spans. Flashing red lights are shown from the top of the middle of those spans and from the top of the northern lift tower.

#### BENICIA-MARTINEZ HIGHWAY BRIDGE

Privately maintained lights marking this bridge are shown, as follows:
An occulting red light, with 3 fixed white lights in a vertical line above, on each side of the span over the middle of Suisun Pt. Reach. The occulting red lights change to occulting green when the lift span of the adjacent railroad bridge is fully open.
A fixed green light on each side of the span over the middle of the channel between Piers 6 and 7.
Fixed red lights mark Piers 4 through 12 and fixed green lights mark the center of the peners.

the center of the spans.

	Place	Height referred to datum of soundings (MLLW)				
Name	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water	
Benicia	(38°03'N/122°08'W)	feet 5.3	feet 4.8	feet 0.9	feet 	

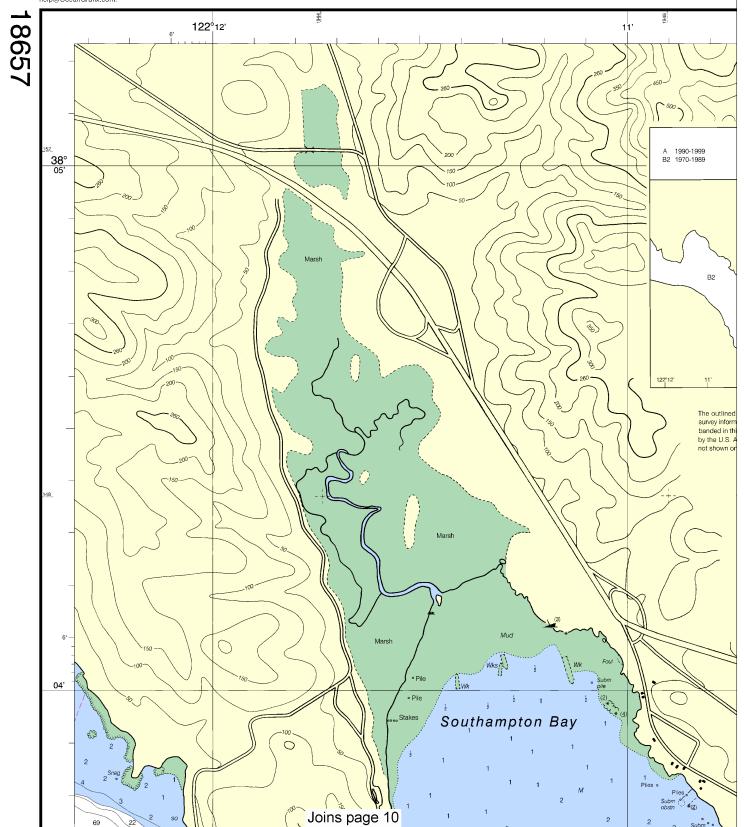
AERO aerona Al alternating B black Bn beacon C can DIA diaphone F fixed FI flashing	IQ interno Iso isoph LT HO II M nautio m minuti	upted quick hase ighthouse cal mile les TR microwave tower	Mo morse code N nun OBSC obscured Oc occulting Or orange Q quick R red Ba Bef radar reflector	R TR radio tower Rot rotating s seconds SEC sector St M statute miles VQ very quick W white	
B black Bn beacon C can DIA diaphone F fixed	Iso isoph LT HO II M nautic m minut MICRO	nase ighthouse cal mile es TR microwave tower	OBSC obscured Oc occulting Or orange Q quick R red	s seconds SEC sector St M statute miles VQ very quick W white	
Bn beacon C can DIA diaphone F fixed	LT HO II M nautic m minut MICRO	ighthouse cal mile es TR microwave tower	Oc occulting Or orange Q quick R red	SEC sector St M statute miles VQ very quick W white	
C can DIA diaphone F fixed	M nautic m minut MICRO	cal mile es TR microwave tower	Or orange Q quick R red	St M statute miles VQ very quick W white	
DIA diaphone F fixed	m minut MICRO	es TR microwave tower	Q quick R red	VQ very quick W white	
F fixed	MICRO 1	TR microwave tower	R red	W white	
FI flashing	Mkr mar	rker	Ra Ref radar reflector		
				WHIS whistle	
			R Bn radiobeacon	Y yellow	
Bottom characteristi	os:				
Blds boulder	Co coral	gy gray	Oys oysters	so soft	
bk broken	G gravel	h hard	Rk rock	Sh shells	
Cy clay	Grs grass	M mud	S sand	sy sticky	
Miscellaneous:					
AUTH author	zed Obstn	obstruction	PD position doubtful	Subm submerged	
ED existence	ED existence doubtful PA position appro-		Rep reported		

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E	SUISUN BAY								٦
	TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO AUG 2012								
	CONTROLLING DEPTHS FROM SEAWARD IN FEET AT MEAN LOWER LOW WATER (MLLW) PROJECT DIMENSIONS								
	NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (NAUT. MILES)	DEPTH MLLW (FEET)	
	SUISUN PT. REACH	45	48	50	8-12	300	0.8	35	1
	BULLS HEAD CHANNEL	38	39	35	8-12	300-350	1.2	35	
	EAST BULLS HEAD CHANNEL	33	34	32	8-12	350	1.1	35	
	PT. EDITH CROSSING RANGE	36	34	32	8-12	350	1.1	35	П
!	NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION								
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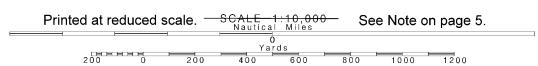
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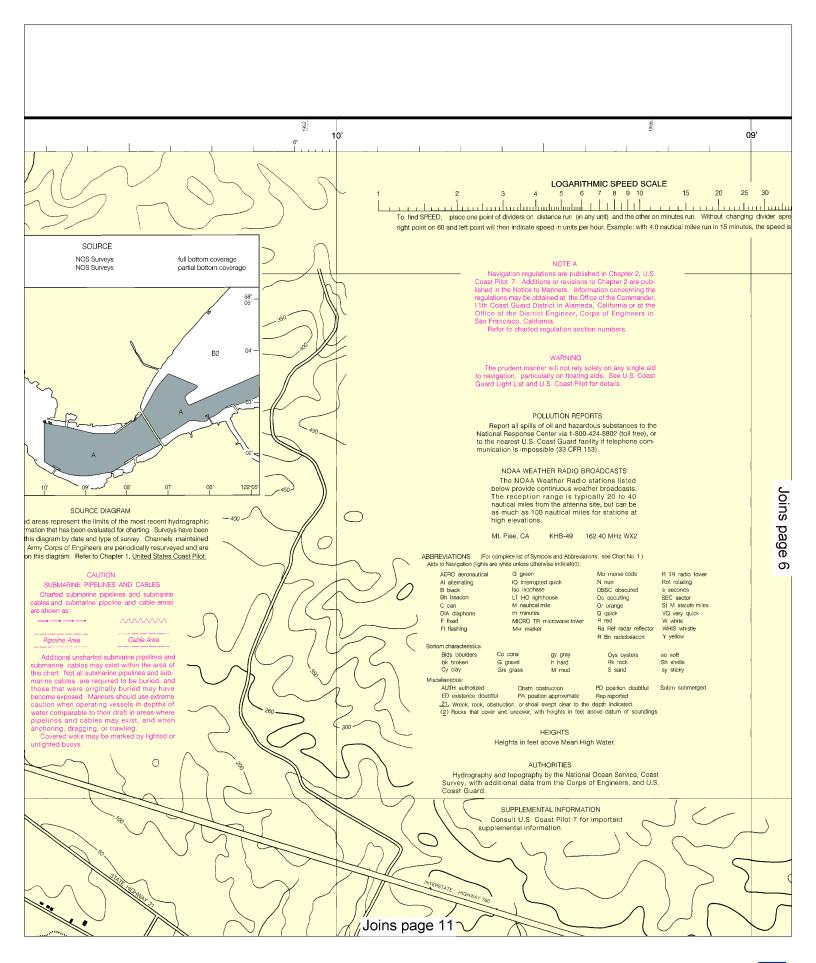
PRINT-ON-DEMAND CHARTS

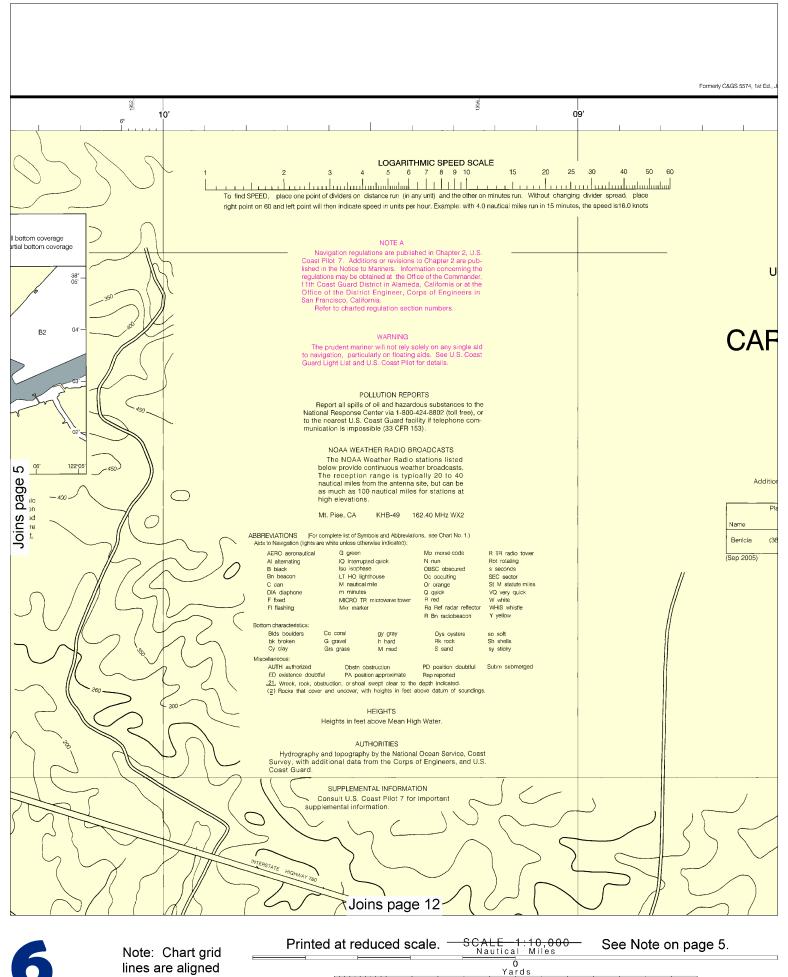
NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, http://NauticalCharts.gov, help@NauticalCharts.gov, or OceanGrafix at 1-877-56CHART, http://OceanGrafix.com, or help@OceanGrafix.com.





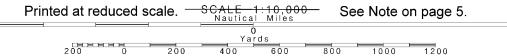


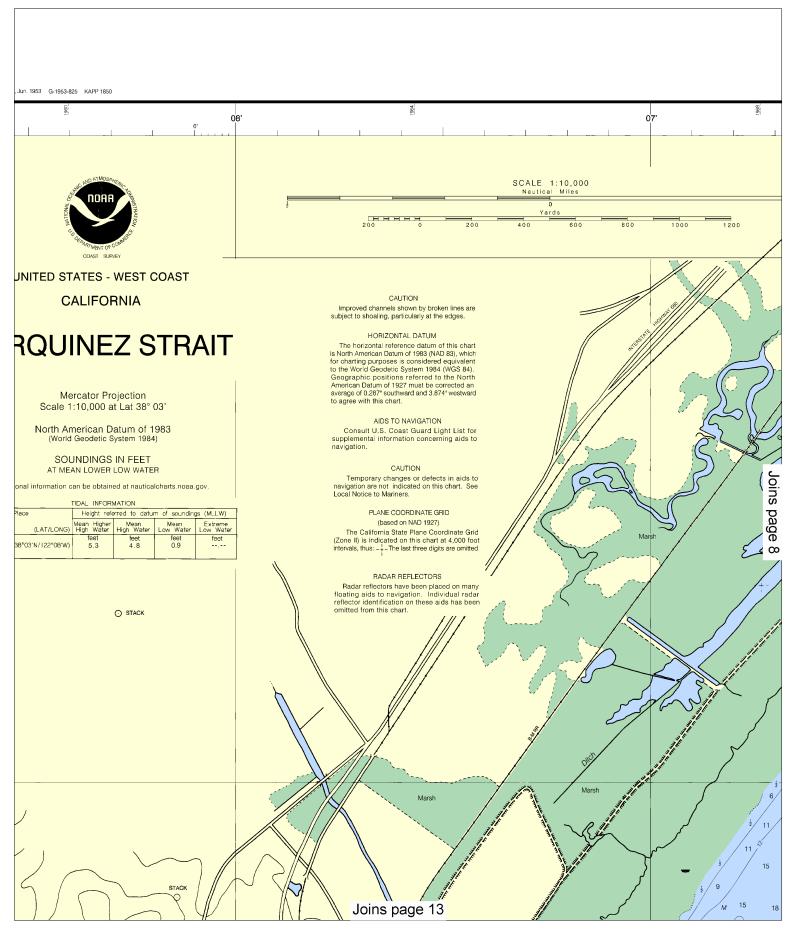


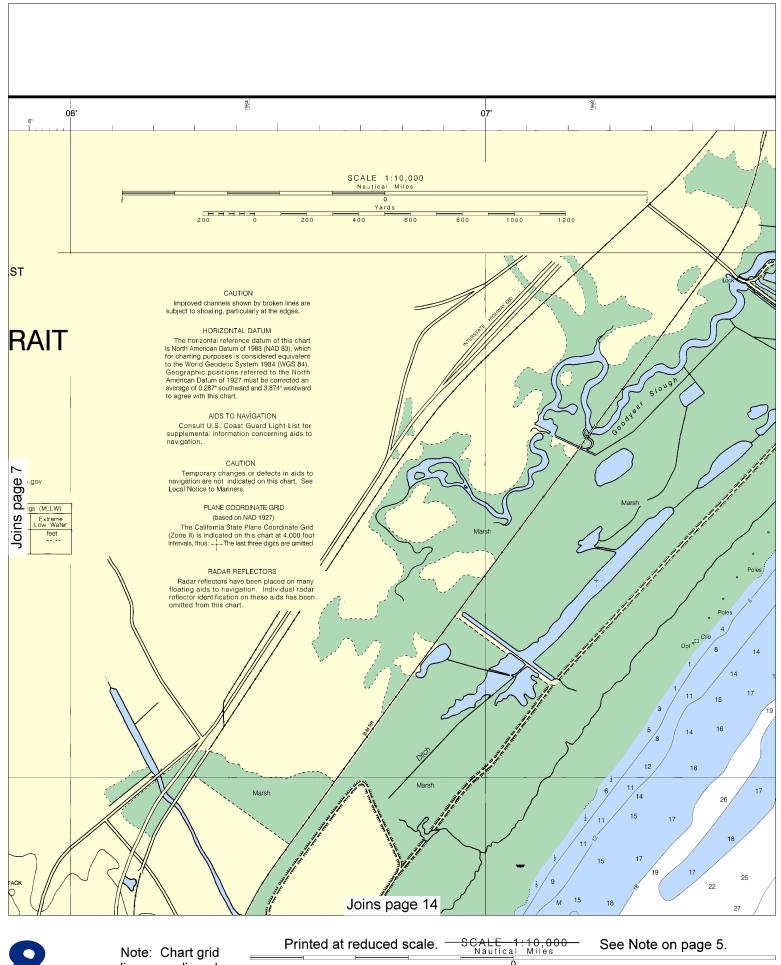




with true north.





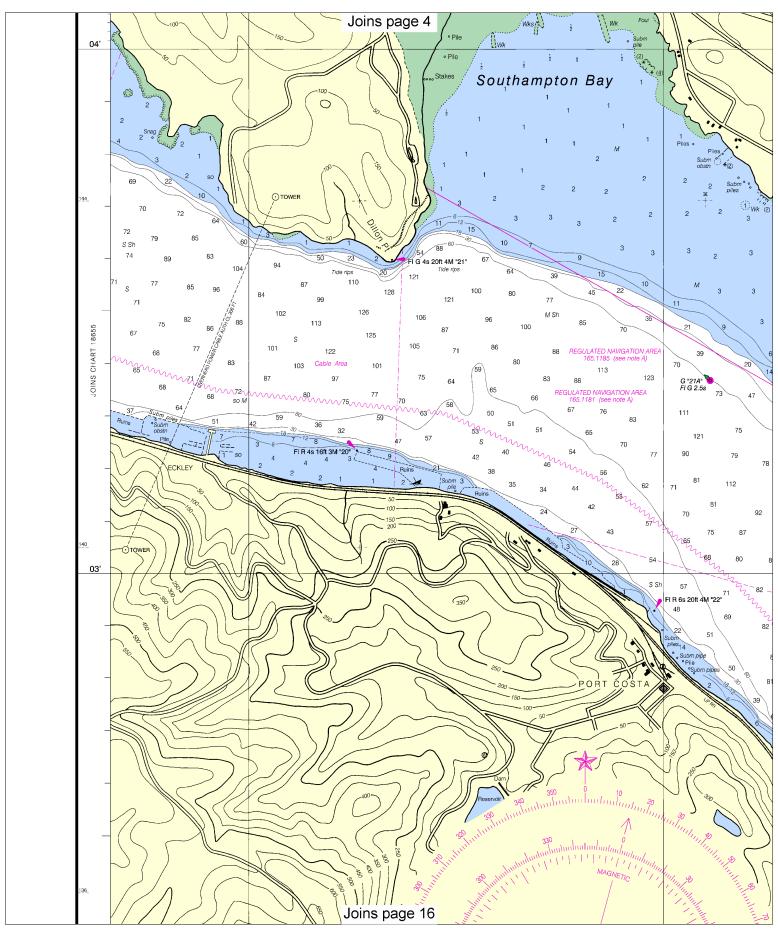


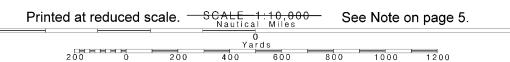


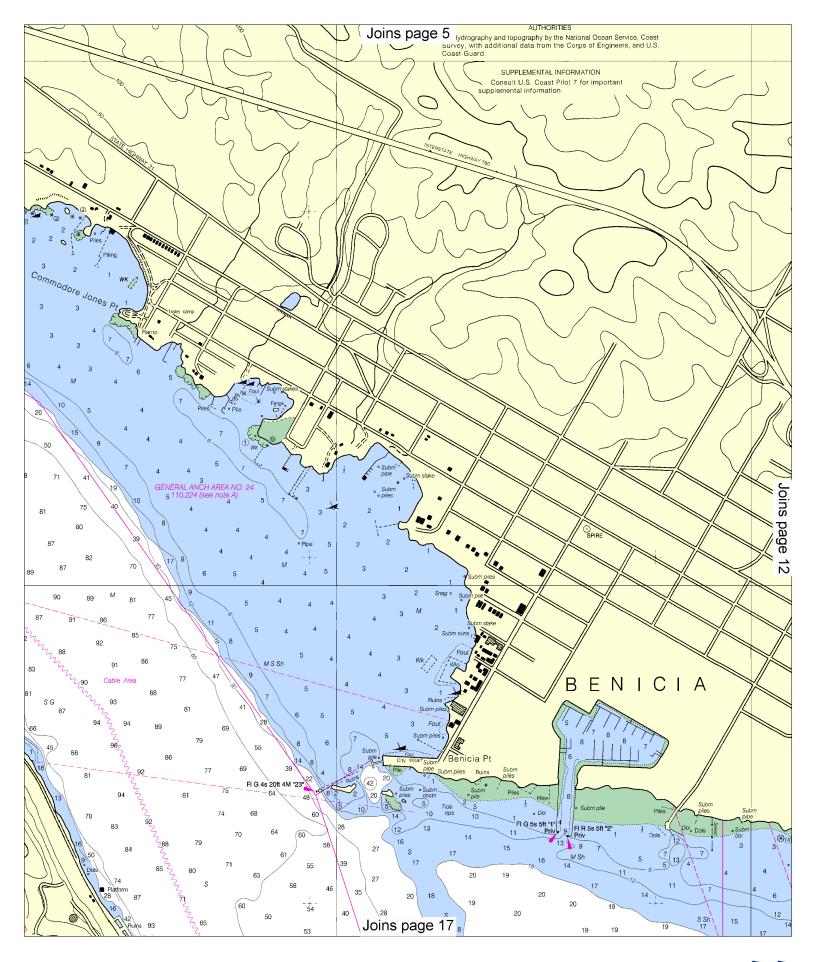
lines are aligned with true north.

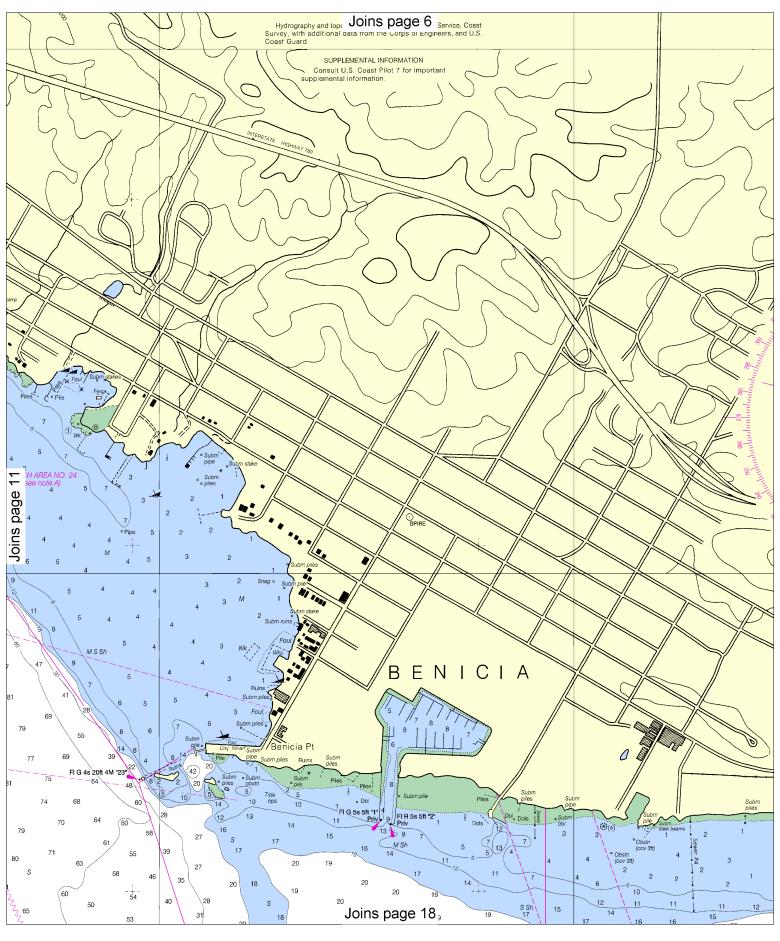


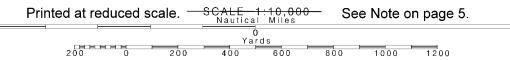
# **SOUNDINGS IN FEET** 122°05' 06' CONTINUED ON CHART 18656 22 38° 05' 22 15 20 18 10 4 M Sh 15 S Sh 04' 22 33 33 Joins page 15

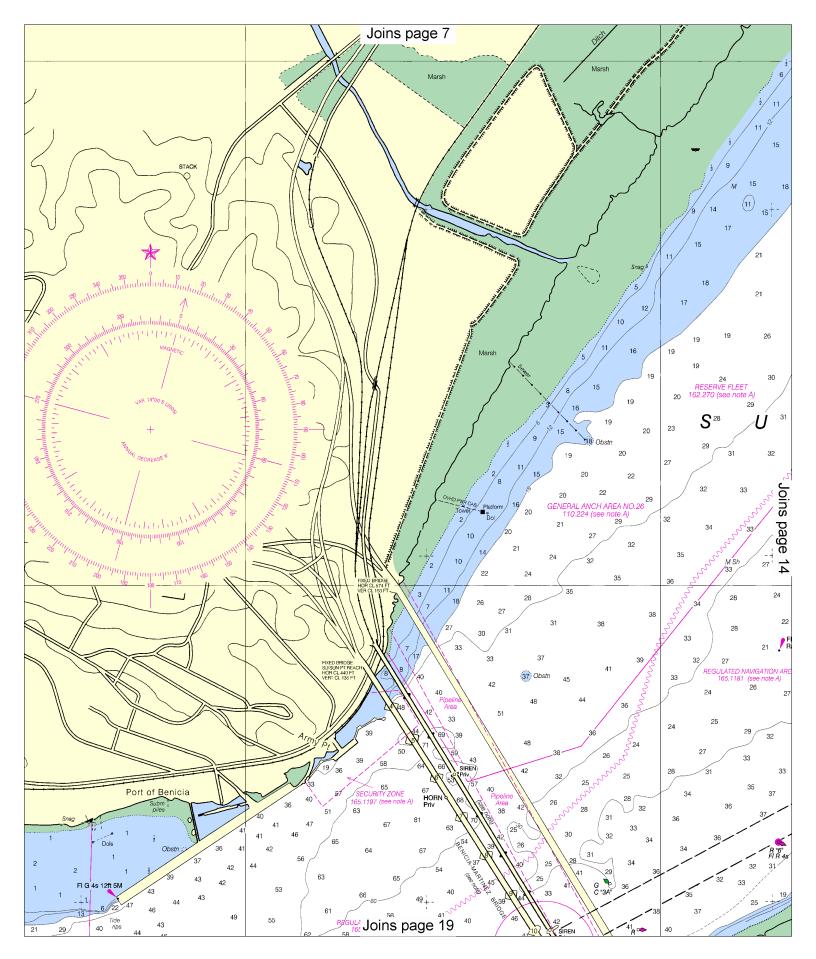


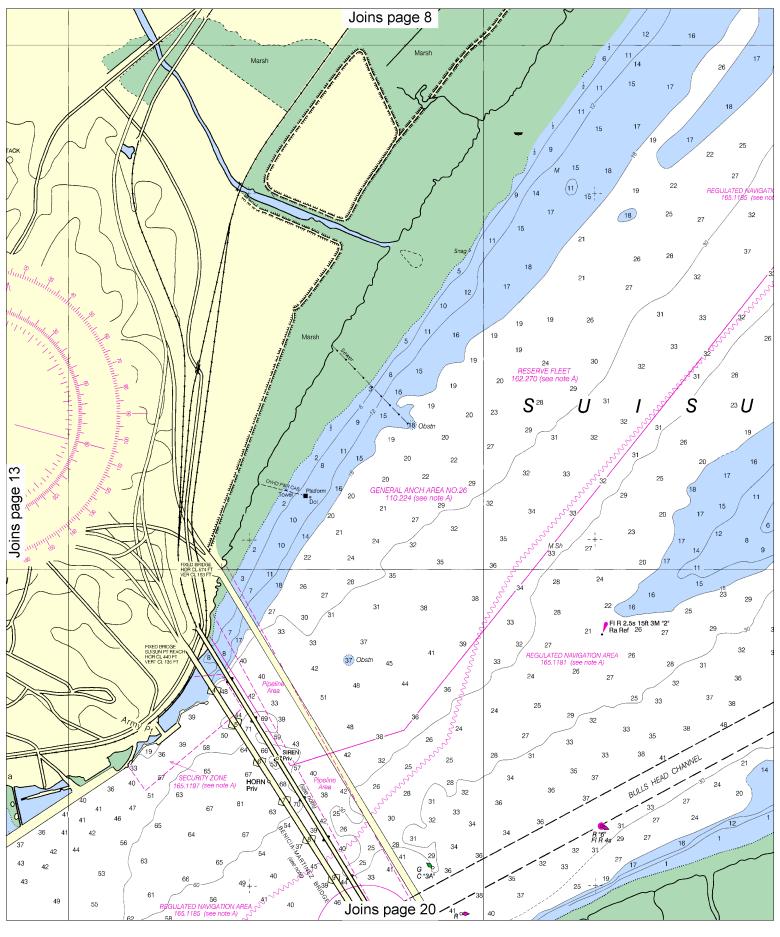


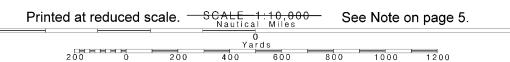


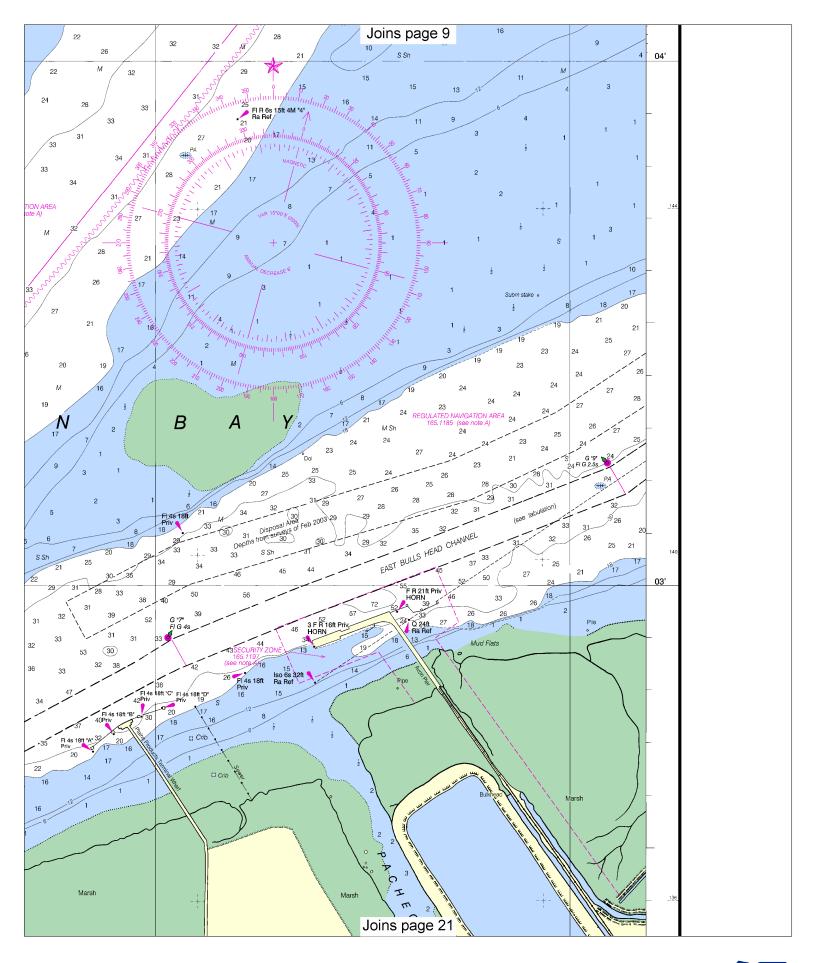


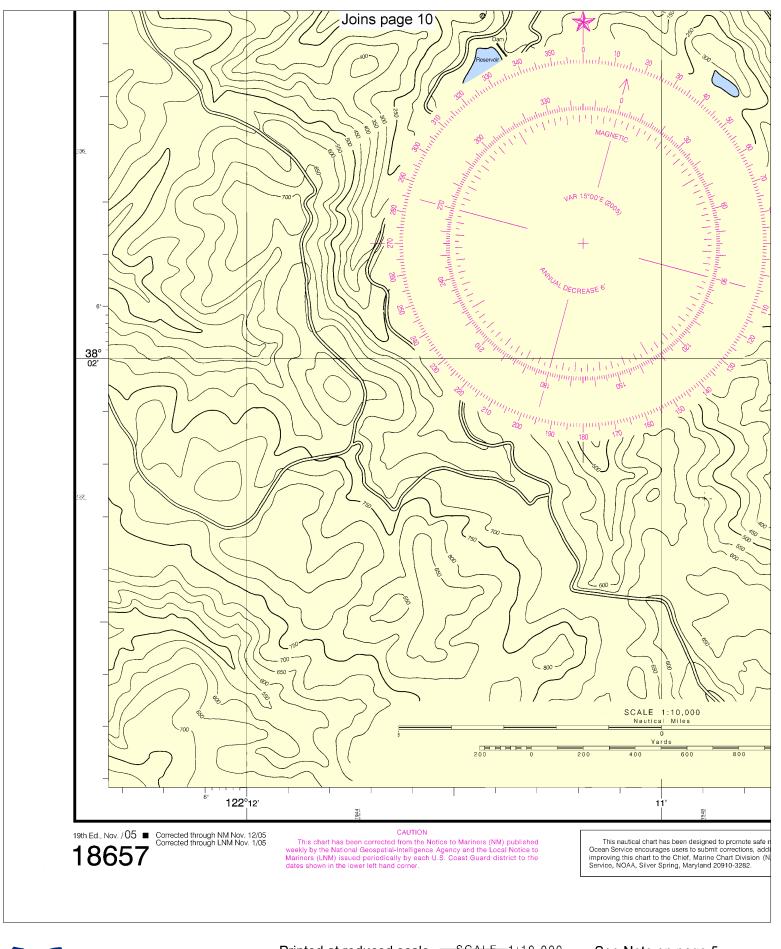


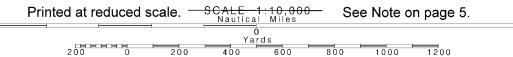


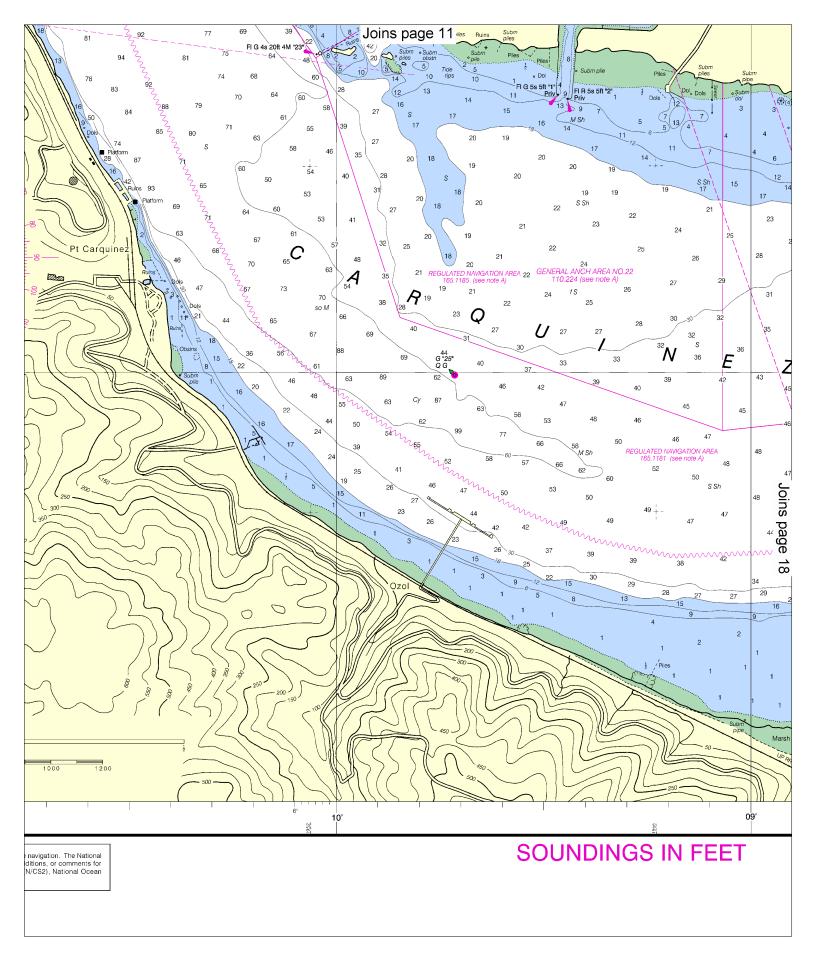


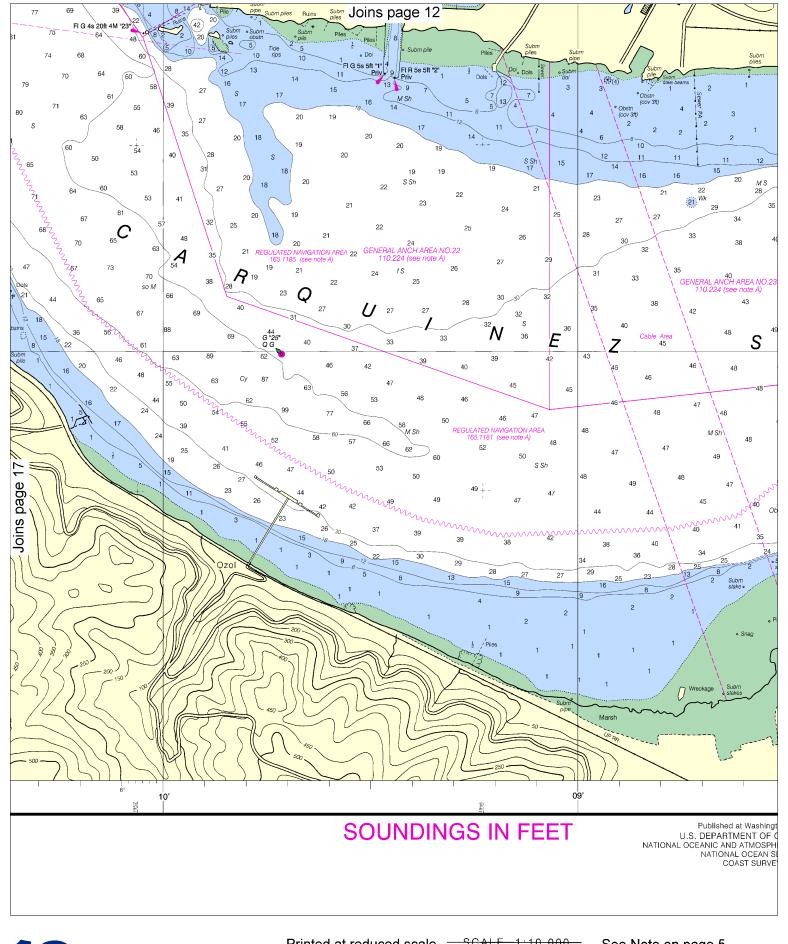


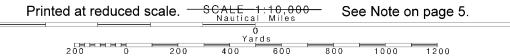


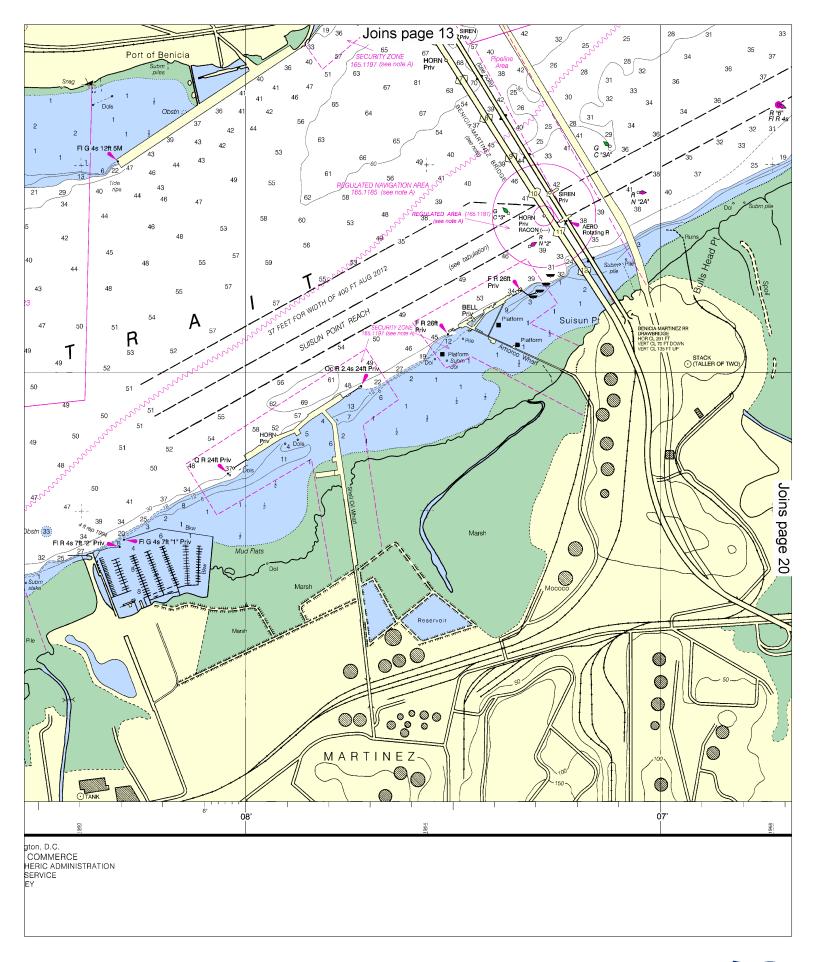


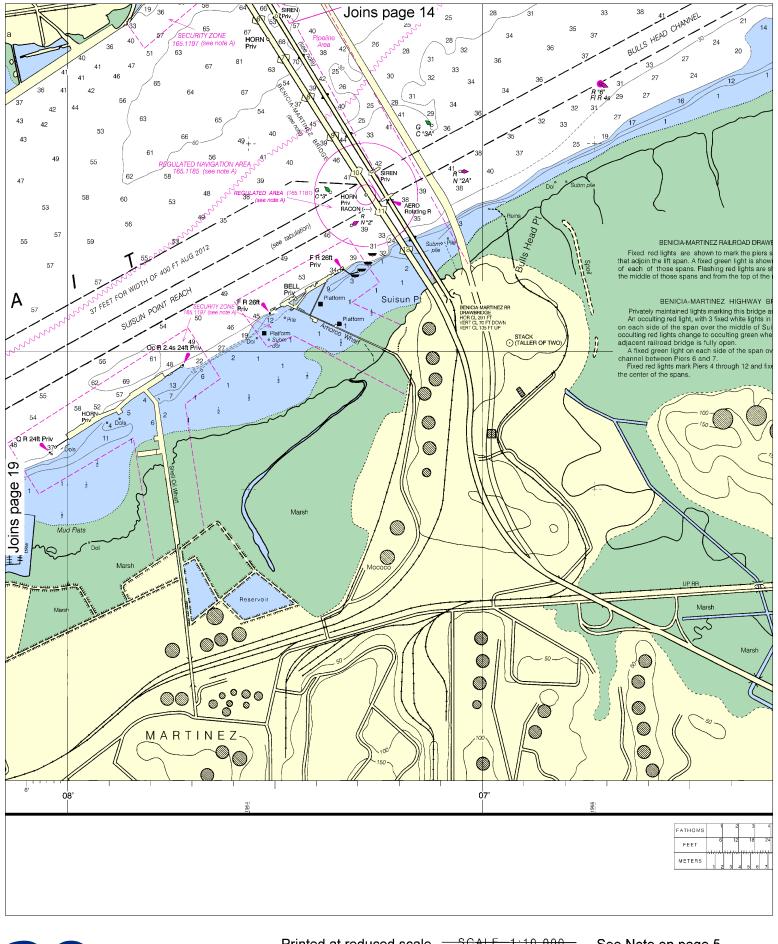


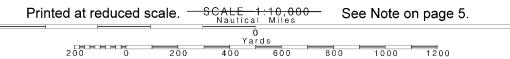


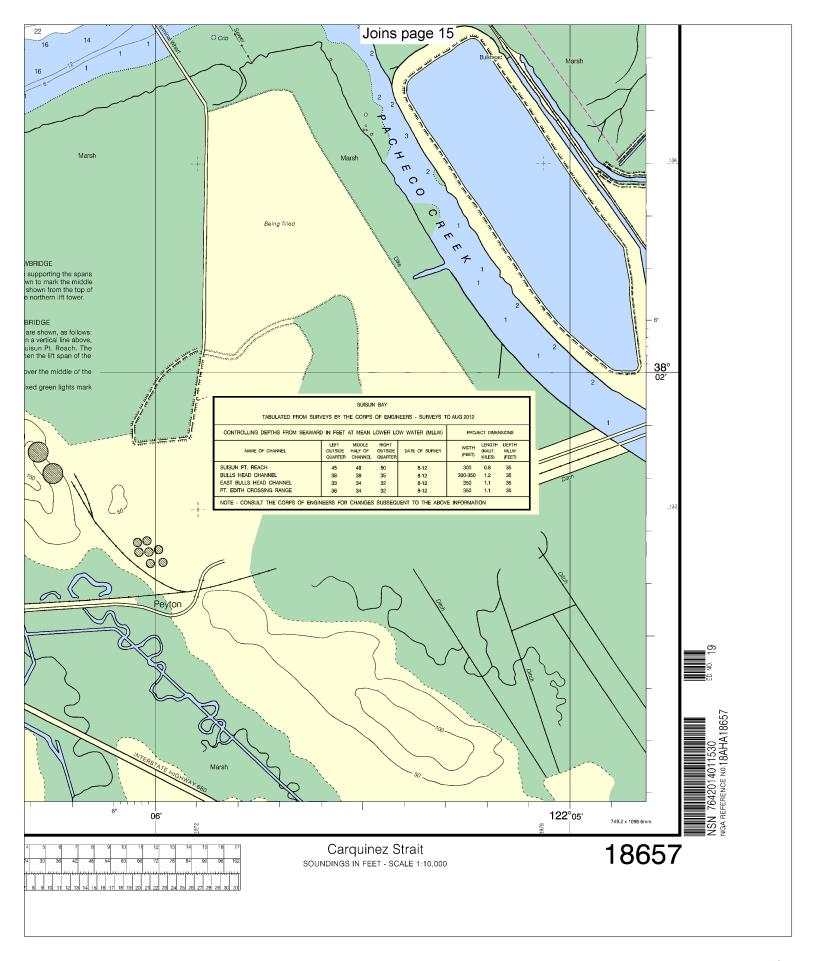














# VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here. Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

## **Distress Call Procedures**

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of

Emergency; Number of People on Board.

- · Release transmit button.
- Wait for 10 seconds If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

http://www.nws.noaa.gov/nwr/

# **Quick References**

Nautical chart related products and information — http://www.nauticalcharts.noaa.gov

Online chart viewer — <a href="http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html">http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html</a>

Report a chart discrepancy — http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx

Chart and chart related inquiries and comments — http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs

Chart updates (LNM and NM corrections) — http://www.nauticalcharts.noaa.gov/mcd/updates/LNM\_NM.html

Coast Pilot online — http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm

Tides and Currents — http://tidesandcurrents.noaa.gov

Marine Forecasts — http://www.nws.noaa.gov/om/marine/home.htm

National Data Buoy Center — http://www.ndbc.noaa.gov/

NowCoast web portal for coastal conditions — http://www.nowcoast.noaa.gov/

National Weather Service — http://www.weather.gov/

National Hurrican Center — http://www.nhc.noaa.gov/

Pacific Tsunami Warning Center — http://ptwc.weather.gov/

Contact Us — http://www.nauticalcharts.noaa.gov/staff/contact.htm



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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

